QuickTime on Campus

A Case Study

Session 709

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Introduction

- The purpose of this session is to…
- Provide best practices in using synchronized lectures to enhance learning and…
- To provide knowledge and resources necessary to create synchronized lectures in QuickTime for your organization

What You'll Learn

- Benefits of online synchronized lectures
- CID design and development process
- Tips in Acquisition, Authoring and Deployment
- How to author synchronized lectures using:
  - QuickTime Player Pro
  - SMIL
  - HREF tracks
  - LiveStage Professional

Technology Framework

About BYU

- Private University
- Currently Enrolls 34,000+ Students
- Admits 7,000 New Freshmen Yearly
- Continuing Education
  - 450,000+ Enrollments Yearly
- Center for Instructional Design
  - Designs and develops online materials for on campus and distance education courses

The Challenge

- Freeze on new buildings
- Freeze on opening new full time positions
- Freeze on student enrollments
- The number of applicants that are turned away each year is growing
- Freshmen are arriving smarter and expecting more
- Can we accommodate more students and improve the student learning experience through the use of technology?

Hybrid Distributed Learning Model

- Students spend half their scheduled class time learning through synchronized lectures
- The other half is in-class, face-to-face collaboration, discussion, etc.

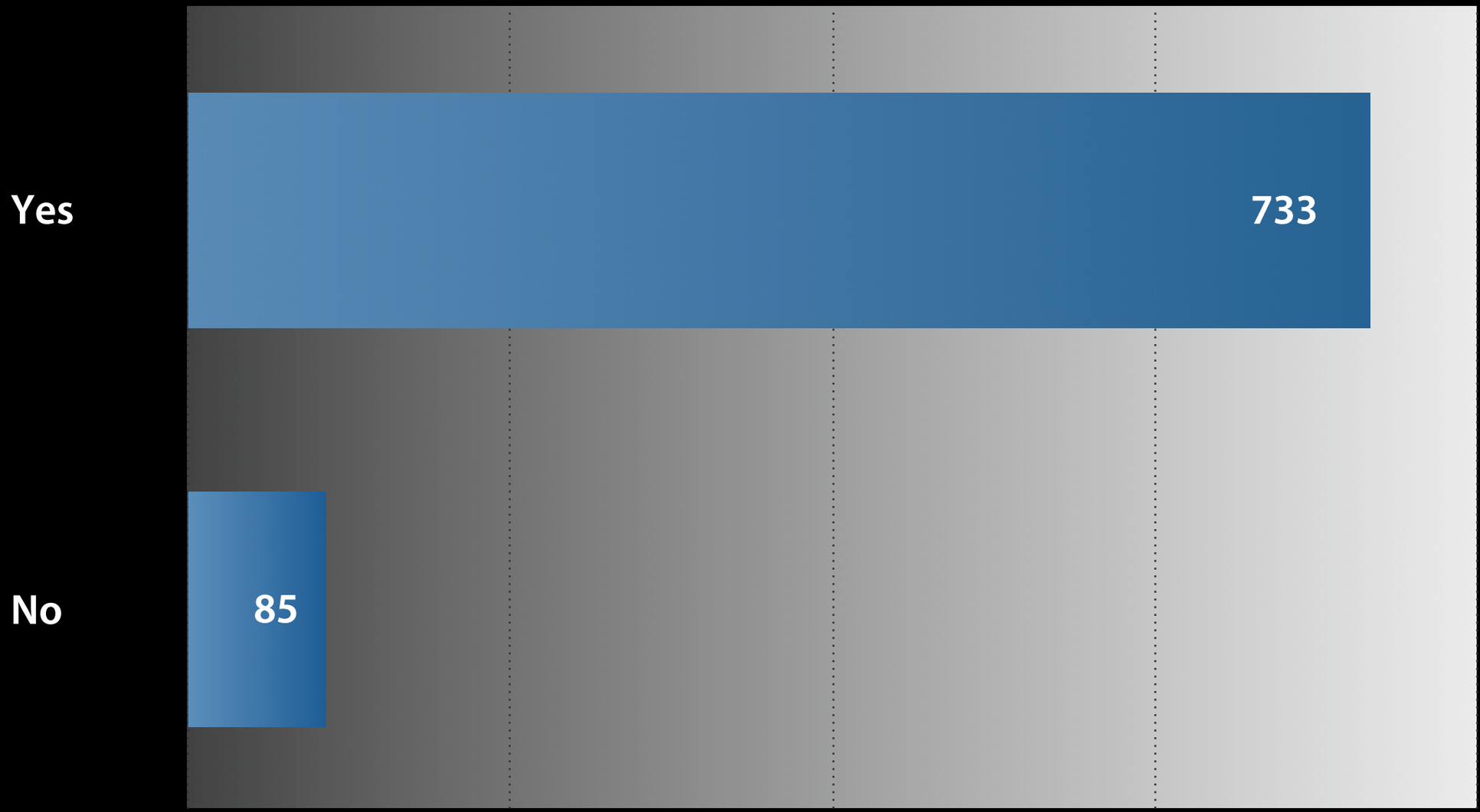
Example: Accounting 200

Accounting 200 Information

- Enrolls 1,200 students annually
- 50 hours of lectures on 6 CD-ROMs
- Took 2.5 years to develop
- Software Requirements:
  - Windows 95, 98, ME, 2000, NT
    - no MacOS support, Windows XP support with a little work
  - IE 5.0+
  - JAVA VM
  - Windows Media Player 6.4 - 8 (not compatible w/ WM9)
  - Flash 3.0+
  - Acrobat Reader 4.0+

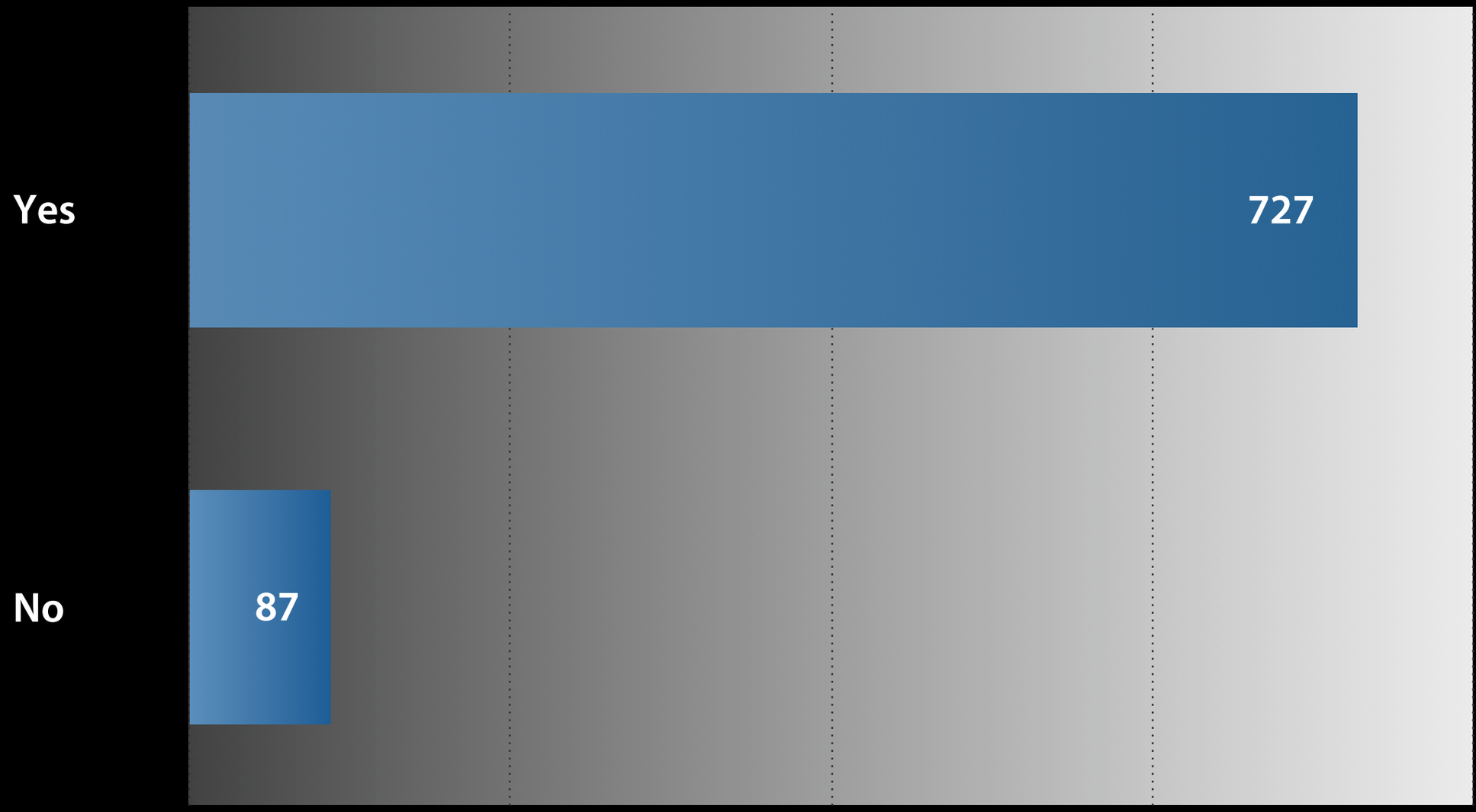
Acc200: Student Evaluations

Did you prefer the CD/online/limited lecture format of this course to a more traditional textbook/lecture format?



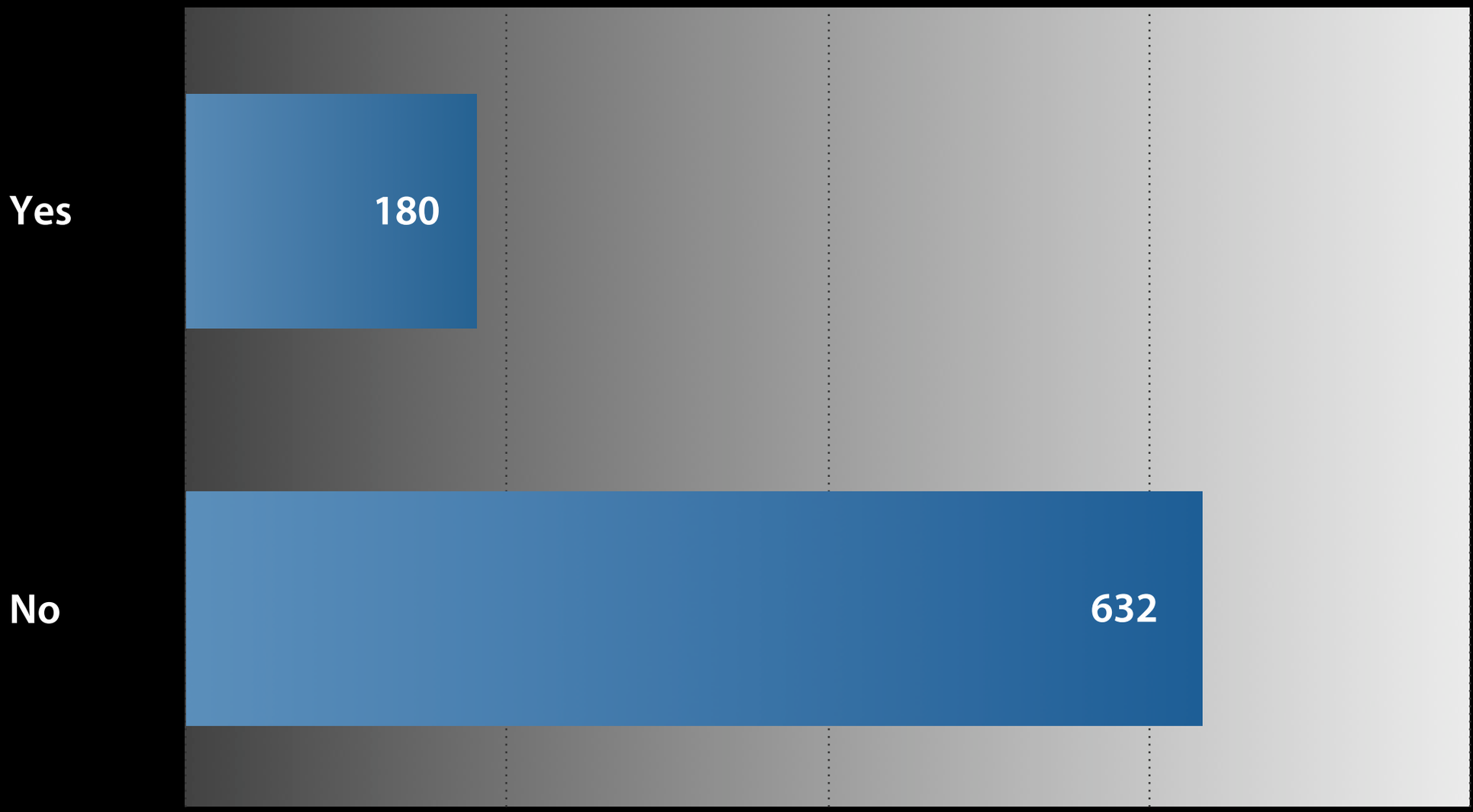
Acc200: Student Evaluations

For this course, which format do you think would have been better in helping you more effectively and efficiently learn the core exam material?



Acc200: Student Evaluations

I would prefer the eight required lectures to be on a CD and thereby never meet as a class



Acc200: Student Positive Comments

“It was convenient and flexible. Plus, I review difficult concepts with Norm [the instructor] on my own time”

“The BEST reason why I like the CD-format is because I can GO BACK and see the lectures over-again for clarification”

“It allows you to go at your own pace. if you didn't quite understand something you can go back. so this way you don't have the problem of the one kid in class always asking dumb questions and wasting everyone elses time”

Acc200: Student Negative Comments

“I had quite a few problems with the technology and this was annoying to deal with when I had to do a lessons”

“It‘s not as easy to study off the CDs as it is out of a book”

“It's hard because you cannot ask questions for clarification”

“I was just frustrated that it didn't work on my home pc with windows XP”

“Acc200 is not Macintosh compatible. This was a major inconvenience”

Acc200: XP Compatibility Problems

- 5 pages of instructions for playback on XP
  - Uninstall RealOne
  - Uninstall all JAVA applications
  - Uninstall JAVA VM
  - Follow 40 step process of installing new VM, IE6 setup, etc.

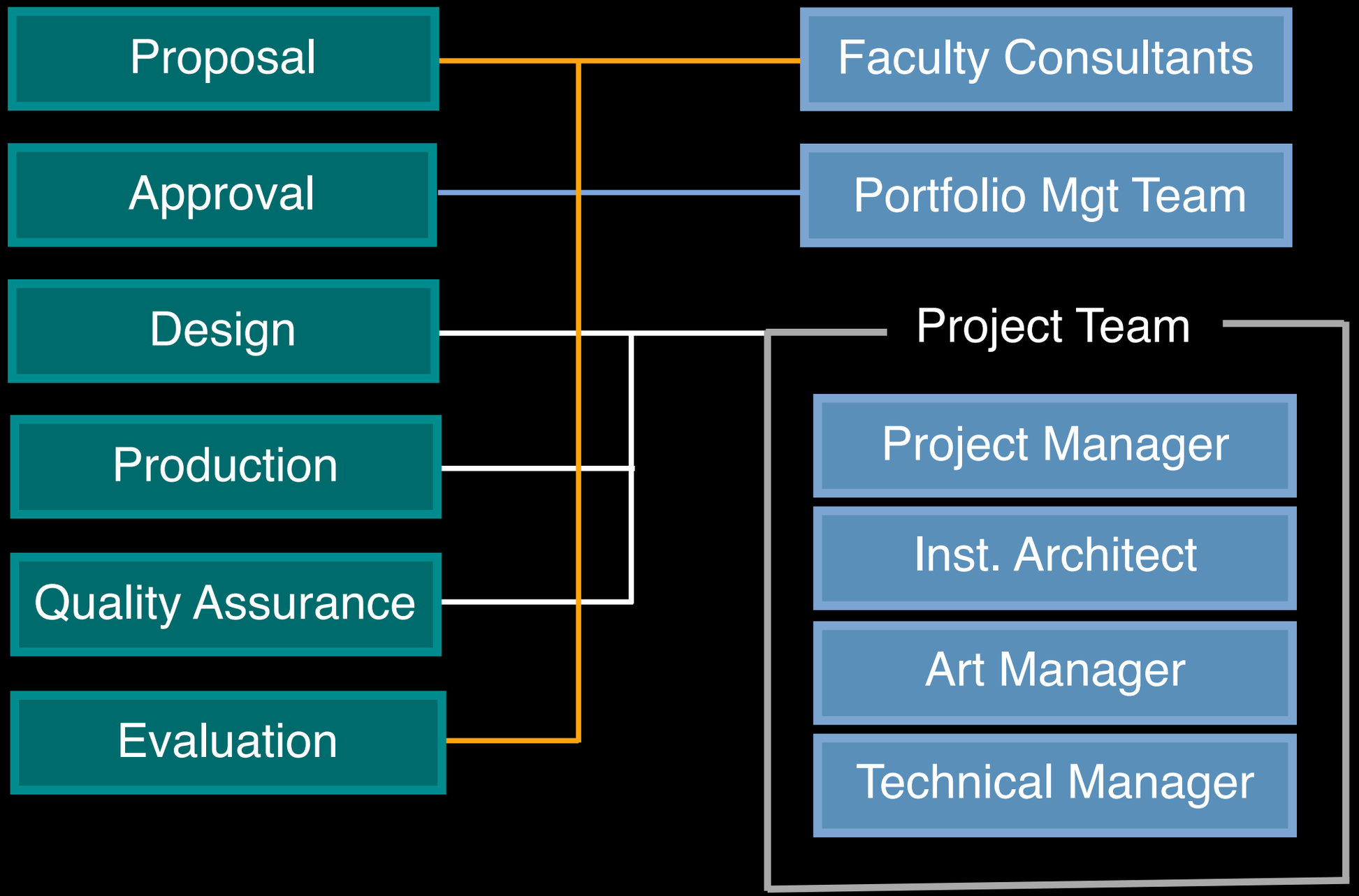
Acc200: Hindsight

- “We chose the wrong media architecture”

New Project: Media Sync

- Take a closer look and requirements for synchronized lectures on campus
- Ideal solution to easily create cross-platform synchronized lectures

CID Project Workflow

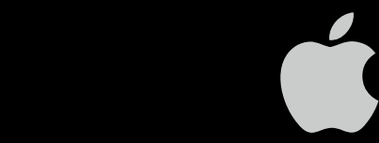


Media Sync Specifications

- Cross Platform
- Full Transport Control (Start, Stop, Rewind, Etc.)
- Navigable Index
- Synched slides with video or audio
- Compliant with accessibility standards
- Progress indicator that’s “scrubbable”
- Support for stand-alone lessons or whole courses
- Deploy on CD-ROM, DVD-ROM, or Web

Introducing QuickTime

- Advantages
  - Cross Platform Solution
  - Track Based Architecture
  - Impeccable Synchronicity
  - Long History of CD-ROM and Web Video Solutions
  - Support a single plug-in, not a collection of products
- Disadvantages
  - The dreaded install
  - The dreaded nag-screen
  - Limited authoring tools
  - Use cases?



Authoring QuickTime Lectures

Acquire Slides

Capture Audio/Video

Sync Slides

Add Interface

Add Caption

Add Index

Prep for Deployment

Acquiring the Slides

- Will need to export to image format QuickTime supports
  - PICT, JPEG, GIF, PNG, etc.
- If using PowerPoint, export on same machine it was authored on
  - Fonts, cross-platform issues, etc.
    - Macintosh PICT can use the fonts installed on system

Capturing the Audio or Video

- Use a tripod
- Use a lavalier or close microphone
- Prepare the lighting
- Capture to tape
- Pre-processing and compression with Squeeze, Cleaner, and Compressor
- Have instructor repeat questions
- Record a formal session, instead of in a live class

Indexing the Slides

- Each slide will need a time associated to it
- Low tech
  - Wristwatch and paper
- High tech
  - LiveStage Pro
  - Other tools

Creating the Caption

- Using QuickTime Player Pro and a word processor
- Using MagPie
  - http://ncam.wgbh.org/webaccess/magpie/
- Other tools
- QuickTime can search captions
  - Feature request—Make available to free version of player
  - Fix issues with wired sprites

Creating the Interface

- Any image editing application will do
- Leverage PhotoShop layers

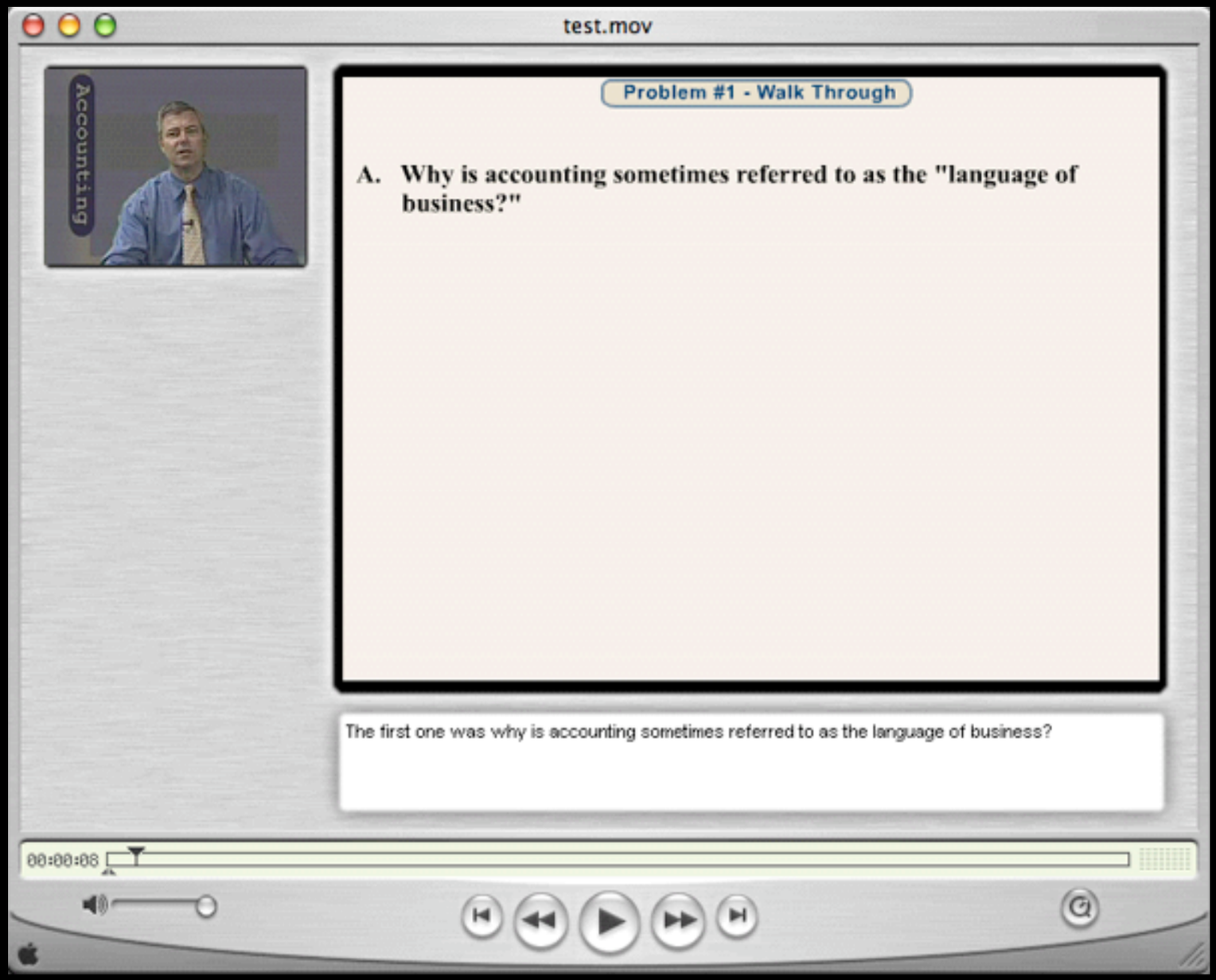
Creating an Navigable Index

- Leveraging chapter tracks
  - Using Applescript
  - GoLive
  - LiveStage Pro
- Making a visual index
  - Flash
  - LiveStage Pro

Putting It All Together

- Many solutions in QuickTime
  - QuickTime Player Pro
  - HREF tracks
  - SMIL
  - LiveStage Professional

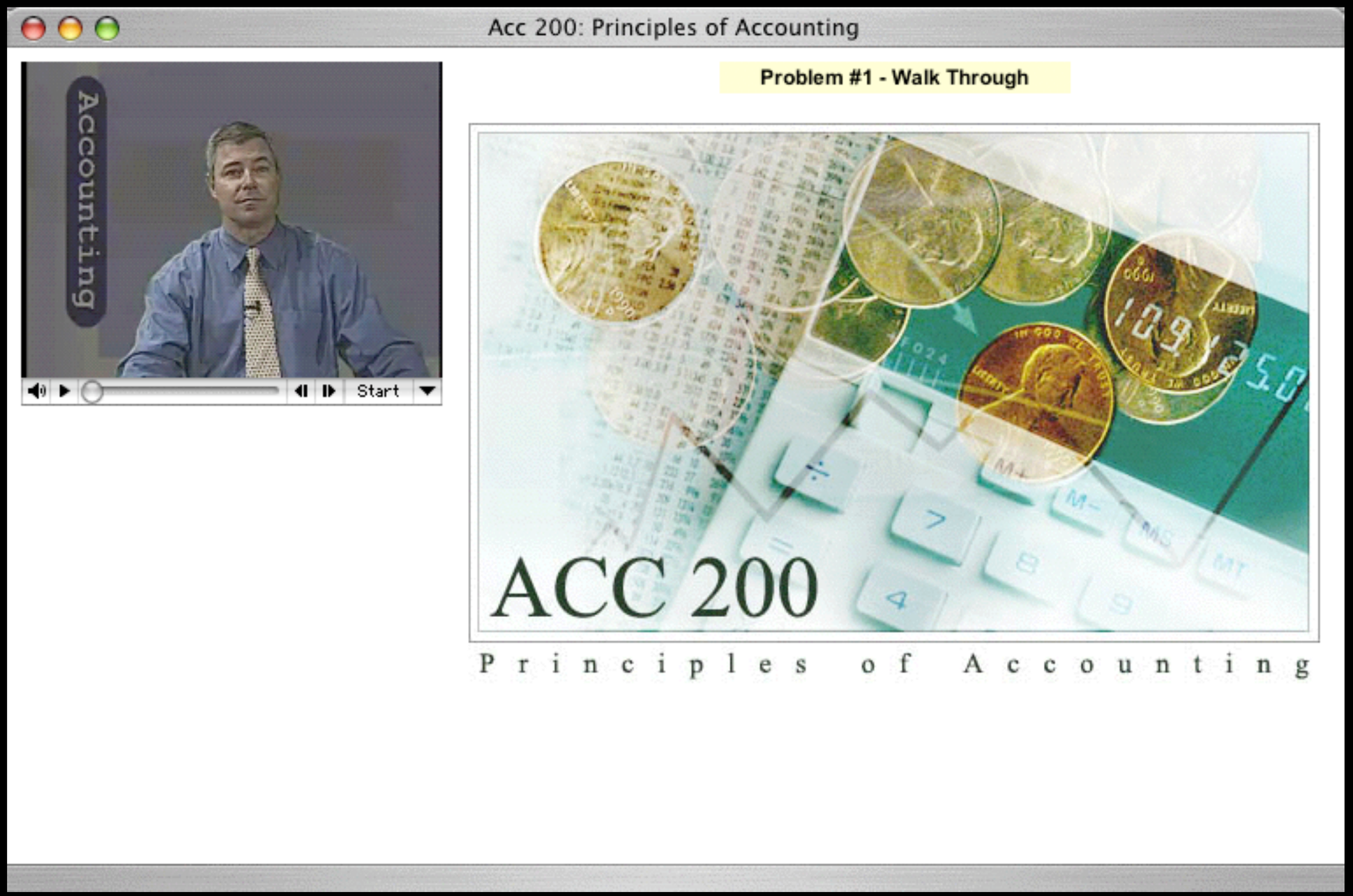
Authoring With QuickTime Player Pro



Demo

http://developer.apple.com/wwdc2003/urls.html

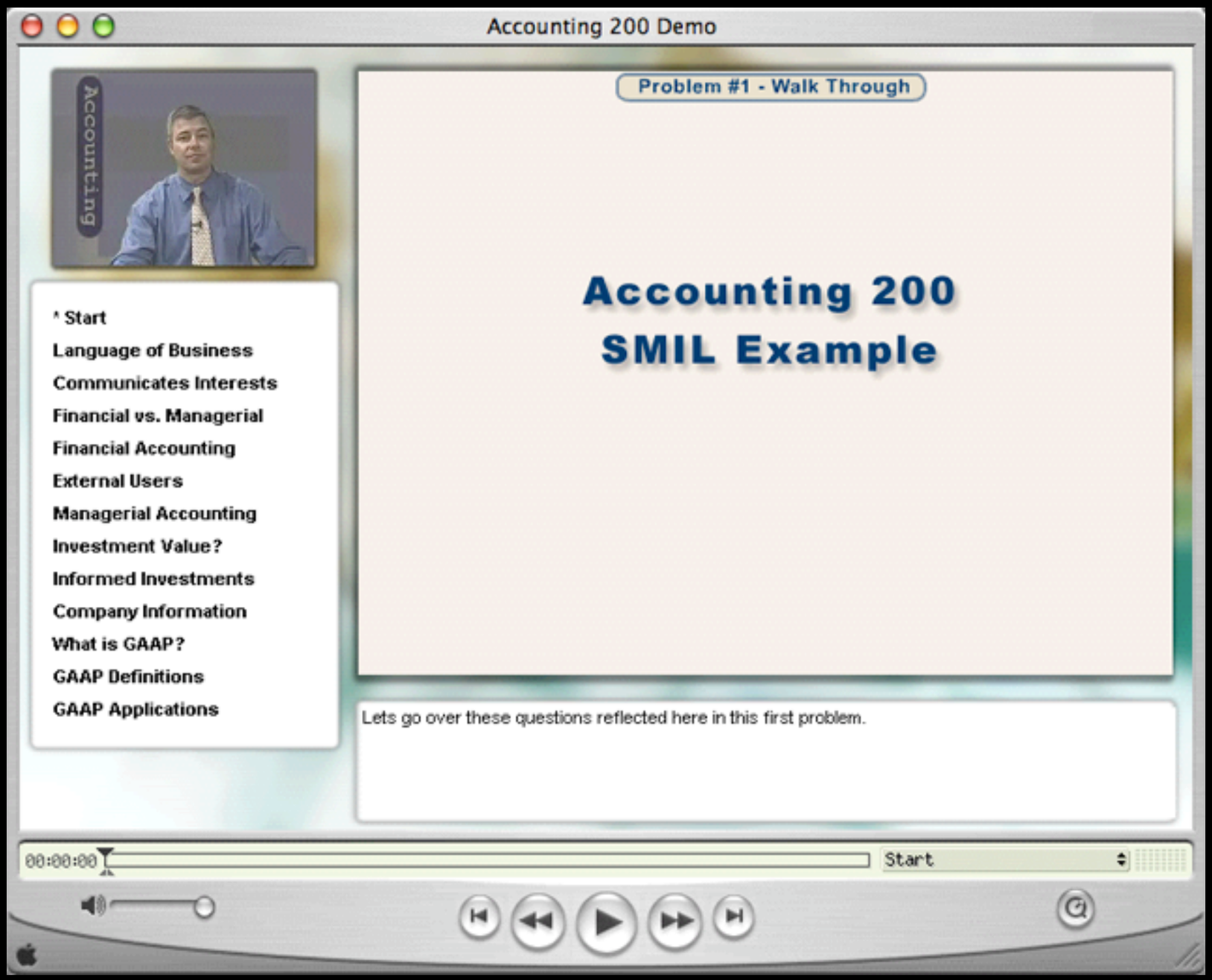
Authoring With HREF Tracks



Demo

http://developer.apple.com/wwdc2003/urls.html

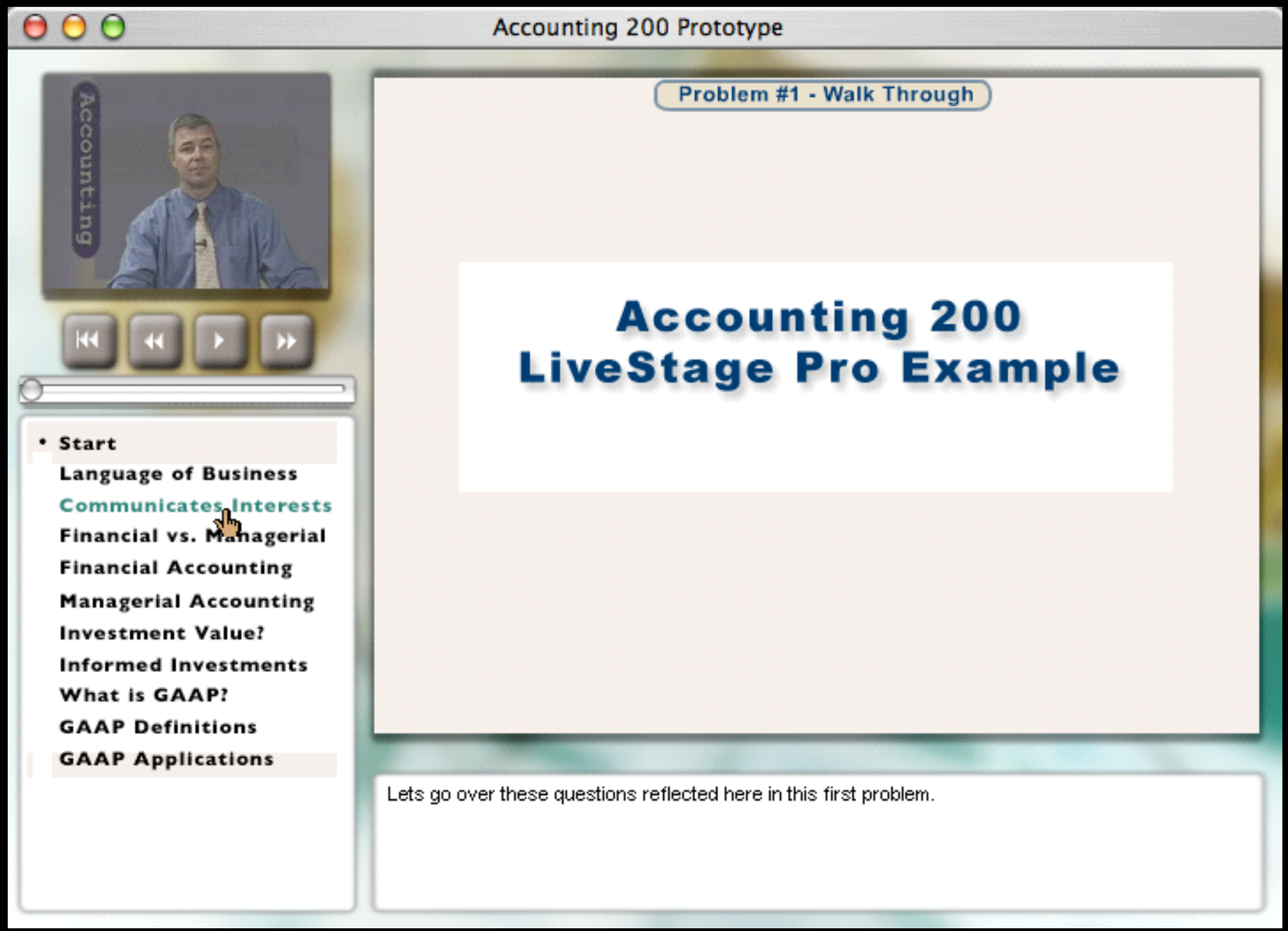
Authoring in SMIL



Demo

http://developer.apple.com/wwdc2003/urls.html

Authoring in LiveStage Professional



Demo

http://developer.apple.com/wwdc2003/urls.html

Deployment Options

- CD-ROM/DVD-ROM
- Progressive web download
- Real-time streaming

CD-ROM/DVD-ROM Deployment

- Web Browser Deployment
  - Shellout Autolauncher
    - http://www.mrichter.com/cdr/files/files.htm
  - QuickTime Version Checking Through Web Page
    - http://blueabuse.totallyhip.com/tut/09/
- QuickTime Player Deployment
  - Kickstart (LiveStage Pro)
  - Custom Solutions

HTTP Deployment

- Preferred method for instructors
  - Can easily submit changes
  - Students can download and burn CDRs
  - Possible to prevent downloading

RTSP Deployment

- More technical
- Allows for “instant access”
- More sensitive to bandwidth issues
- Not quite as portable
  - Video and audio on RTSP Server
  - Slides/text/graphics on HTTP Server

One More Thing...

Time-Scale Modification

- The human brain can comprehend speech up to 600+ wpm.
- Some professors can be long-winded or boring
- Why not speed up presentation?
- Accouting 200 has used Enounce
- Student feedback
  - Requires the student to focus
  - Lot’s of positive feedback
  - Negative feedback
  - Technical issues
- Let’s do it in QuickTime!

Demo

http://developer.apple.com/wwdc2003/urls.html

Wrap Up

Summary

- QuickTime is a Viable Solution for Synched Lectures
- There are Many Different Ways to Create Them
- We Need Applications That Can Make This Easier!

Roadmap—Wednesday

	Russian Hill	Pacific Heights	Haight/ Ashbury	SOMA
9:00	711 Audio and QuickTime		712 QuickTime for the Web	713 Introduction to QuickTime Interactivity
10:30			714 Large-Scale Webcasting: Macworld Keynote Case Study	715 QuickTime Interactivity Tools
12:00				
2:00	716 Advanced QuickTime Programming Techniques		717 3GP: Myth Versus Reality	718 AppleScript and QuickTime
3:30			719 Administering QuickTime Streaming Server	720 Content Creation for Mobile Phones: Top 10 Success Factors
5:00			721 WiFi and 3G: Let the Games Begin	722 Advanced QuickTime Interactivity

Roadmap—Thursday

	The Mission		Haight/ Ashbury	SOMA
9:00	727 QuickTime Streaming Server Programming		723 The Real Story About MPEG-4 Visual Licensing	724 What's New With QuickTime VR?
10:30			725 QuickTime and Enhanced CDs	726 Cutting-Edge Projects Using QuickTime VR
12:00				
2:00			728 Produce a Listening Party With QuickTime	729 Industrial-Strength Encoding
3:30			FF011 QuickTime Feedback Forum	
5:00				

Roadmap—Friday

	Pacific Heights	The Marina
9:00		
10:30	730 QuickTime Alternative Programming Environments	
12:00		
2:00		731 Internet Application Development: The New Frontier
3:30		
5:00		

Who to Contact

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http://developer.apple.com/wwdc2003/urls.html

For More Information

For More Information

Documentation

General Information
http://www.apple.com/quicktime

Developer Information
http://developer.apple.com/documentation

QuickTime Information
http://developer.apple.com/QuickTime

Do Not Miss!

Lab: QuickTime Content Creation

Meet with QuickTime content experts for daily content specific topics that are of special interest to you. Bring your own media and PowerBook. No appointment is needed—first-come, first-served.

Sacramento Room

Lab: QuickTime Development

Meet with Apple's QuickTime engineers. Each day will emphasize a specific QuickTime development topic. Bring your own code and PowerBook. No appointment is needed—first-come, first-served.

Sacramento Room

Lab Hours

Monday	12:00pm to 6:00pm
Tuesday	9:00am to 6:00pm
Wednesday	9:00am to 6:00pm
Thursday	9:00am to 4:30pm
Friday	9:00am to 6:00pm

Q&A

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WWDC 2003

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